



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO 45268

October 23, 2012

Tim Hoffman - Owner
Dinsmore & Shohl LLP
2015 Dryden Road
Moraine, Ohio 45439

Forest Freeze and John Haymaker - Tenants
S&J Precision
2015 Dryden Road
Moraine, Ohio 45439

Dear Messrs. Hoffman, Freeze and Haymaker:

Re: Summary of Results from 2012 Vapor Intrusion Study
South Dayton Dump and Landfill Site – S&J Precision (Building 12)

The United States Environmental Protection Agency (U.S. EPA) prepared this letter to inform you of the results of the sub-slab (space under your building floor) and indoor air samples collected from your property in 2012. Samples were collected in 2012 as part of the vapor intrusion (VI) investigation at the South Dayton Dump and Landfill (SDDL) Site. Conestoga-Rovers & Associates (CRA) collected these samples to determine if solvent- or petroleum-related compounds (see Table 1) are present in soil vapor beneath the foundations and in the indoor air of your property at concentrations which exceed sub-slab and/or indoor air VI screening levels, as established by the Ohio Department of Health (ODH).

VI is the migration of volatile chemicals from the subsurface into overlying buildings. VI is a potential concern at any building, existing or planned, located near soil, groundwater, or soil vapor containing solvent- or petroleum-related compounds that may volatilize or chemicals that are combustible.

The samples were collected by CRA and submitted to TestAmerica Inc. CRA received and validated the results of the laboratory analysis and submitted those results to the U.S. EPA.

The ODH has recommended the screening levels for sub-slab and indoor air samples. The screening levels represent concentrations of a substance that are unlikely to cause harmful (adverse) health effects in exposed people. Detections in indoor air below these levels are not of a health concern. A summary of the analytical results and comparisons to the ODH screening levels can be found in Table 1.

Compounds detected at concentrations greater than the ODH screening levels from sub-slab and indoor air samples are presented below. All of the air samples are measured in units called parts per billion by volume (ppbv). A map identifying each sample location within your building(s) can be found in **Attachment A**.

TABLE 1
SUMMARY OF 2012 SAMPLING RESULTS
FOR
S&J PRECISION

Building / Probe	Sampling Date	Sample Type	Parameter	ODH Screening Level (ppbv)	Detected Concentration (ppbv)
Building 12 Probe A	1-6-12	Sub-slab	TCE	20	1,300
Building 12 Probe B	1-6-12	Sub-slab	Cis-1,2-DCE TCE	370 20	570 5,600
Building 12 Probe C	1-6-12	Sub-slab	TCE	20	230
Building 12 Probe D	1-6-12	Sub-slab	TCE	20	1,200
Building 12 Probe A	3-7-12	Sub-slab	TCE	20	1,400
Building 12 Probe B	3-7-12	Sub-slab	Cis-1,2-DCE TCE	370 20	530 5,600
Building 12 Probe C	3-7-12	Sub-slab	TCE	20	180
Building 12 Probe D	3-7-12	Sub-slab	TCE	20	940
Building 12 Probe A	3-7-12	Indoor Air	TCE	2	2.7
Building 12 Probe D	3-7-12	Indoor air	TCE	2	3.1

Notes:

DCE – Dichloroethene

TCE – Trichloroethene

What do these results mean?

On March 7, 2012, the chemical trichloroethene (TCE) was observed in a sub-slab sample collected in Building 12 at a concentration as high as 5,600 ppbv. This result exceeds the ODH TCE sub-slab screening level of 20 ppbv. The chemical TCE was also observed in an indoor air sample at a concentration as high as 3.1 ppbv. This result exceeds the ODH TCE indoor air screening level of 2 ppbv. These results confirm that vapor intrusion is occurring in Building 12.

Based on the TCE laboratory results of the sub-slab and indoor air samples collected from Building 12, the U.S. EPA and ODH conclude that there is a potential public health

threat posed by TCE vapor intrusion. U.S. EPA will be contacting you in the near future to discuss mitigation options for your property as part of the SDDL Site removal action.

The U.S. EPA and ODH would like to take this opportunity to thank you for participating in this important investigation.

If you have health-related questions, please contact Dr. Bob Frey at the ODH at 614-466-1069. If you have questions related to the sampling or on-going site investigation, please visit our website at www.epaosc.org/southdaytondumpsite or contact me at 513-569-7539.

Sincerely,

A handwritten signature in black ink, appearing to read "Stev L. Renninger". It is written in a cursive style with a long horizontal stroke extending to the right.

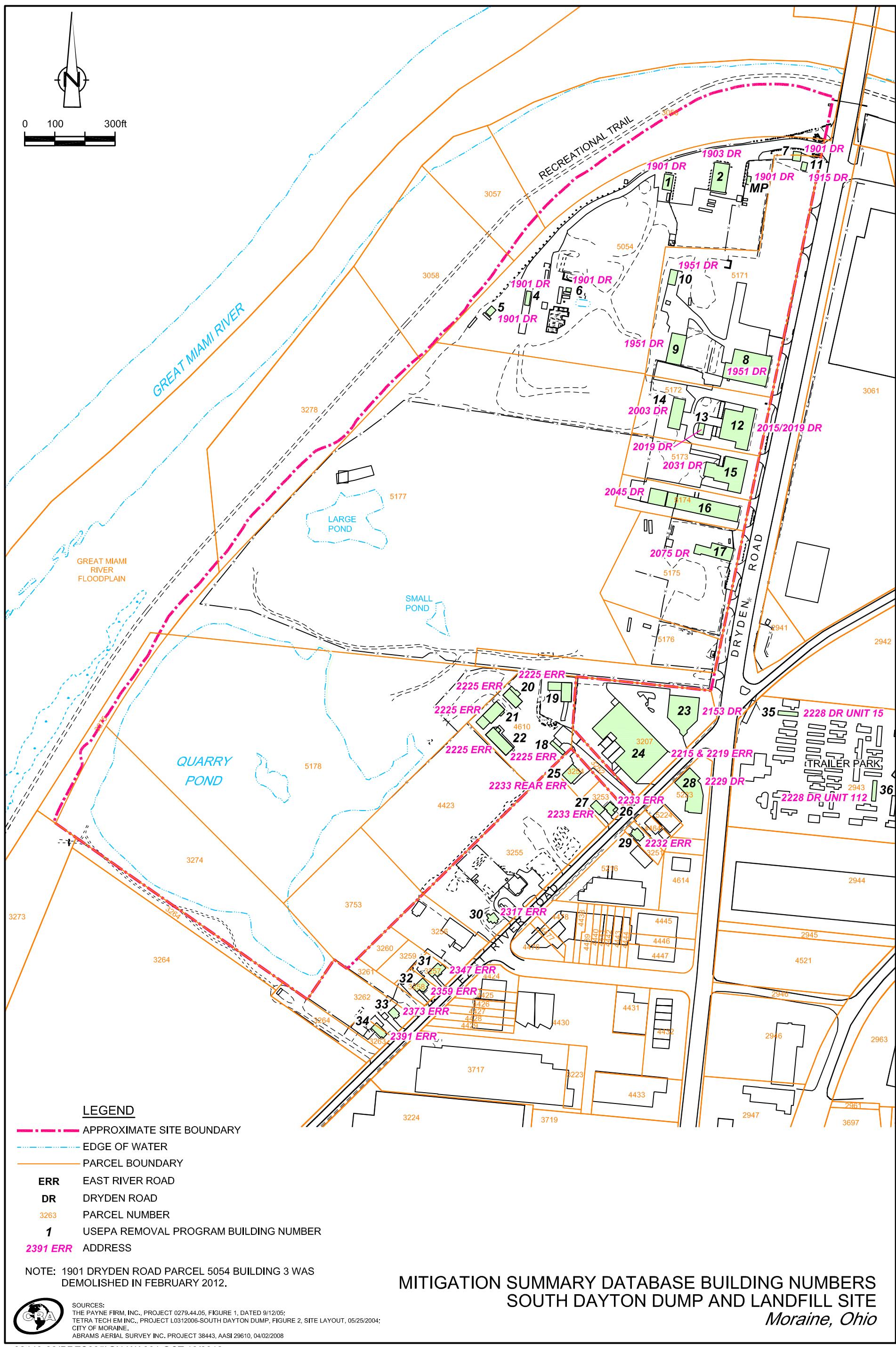
Steven L. Renninger
On-Scene Coordinator
U.S. EPA Region 5

Attachments:

- A – Sample Location Map
- B – Validated Analytical Results

cc: Leslie Patterson - U.S. EPA Remedial Program Manager
Laura Marshall - Ohio EPA, Site Coordinator
Adam Loney, CRA
Tina Ortiz – Mark Fornes Realty, Inc.
Site File

ATTACHMENT A
SAMPLE LOCATION MAP





ATTACHMENT B

VALIDATED ANALYTICAL RESULTS

TABLE 1

SUMMARY OF SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS
BUILDING 12 - 2015 DRYDEN ROAD
VAPOR INTRUSION INVESTIGATION
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/C S&J 2015 Dryden Road	
Sample Location:	1/6/2012	1/6/2012	3/7/2012	3/7/2012	1/6/2012	1/9/2012	3/7/2012	8/7/2012
Sample Date:				Duplicate				1/6/2012
Parameter	ODH Sub-Slab Units	ODH Sub-Slab Screening Levels (Non-residential)	ODH Sub-Slab Action Levels (Non-residential)	a	b			
Volatile Organic Compounds								
1,1,1-Trichloroethane	ppb	NC	NC	3.5 U	R	2.1 U	9.0 U	-
1,1,2,2-Tetrachloroethane	ppb	NC	NC	4.0 U	R	4.3 U	10 U	-
1,1,2-Trichloroethane	ppb	NC	NC	1.9 U	R	3.8 U	4.9 U	-
1,1-Dichloroethane	ppb	160	1600	3.5 U	R	1.8 U	9.0 U	-
1,1-Dichloroethene	ppb	NC	NC	3.0 U	R	2.2 U	2.3 U	-
1,2,4-Trichlorobenzene	ppb	NC	NC	5.0 U	R	6.9 U	6.9 U	-
1,2,4-Trimethylbenzene	ppb	NC	NC	5.2 U	R	4.4 U	4.4 U	-
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	1.8 U	R	3.1 U	3.1 U	-
1,2-Dichlorobenzene	ppb	NC	NC	4.8 U	R	4.9 U	4.9 U	-
1,2-Dichloroethane	ppb	NC	NC	3.1 U	R	3.3 U	3.3 U	-
1,2-Dichloroethene (total)	ppb	NC	NC	35	R	-	780	-
1,2-Dichloropropane	ppb	NC	NC	1.4 U	R	3.6 U	3.6 U	-
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	3.2 U	R	2.2 U	2.3 U	-
1,3,5-Trimethylbenzene	ppb	NC	NC	5.1 U	R	4.6 U	4.6 U	-
1,3-Butadiene	ppb	NC	NC	1.0 U	R	4.5 U	4.5 U	-
1,3-Dichlorobenzene	ppb	NC	NC	4.4 U	R	4.6 U	4.6 U	-
1,4-Dichlorobenzene	ppb	NC	NC	4.4 U	R	4.5 U	4.5 U	-
1,4-Dioxane	ppb	NC	NC	8.8 U	R	5.6 UJ	5.7 UJ	-
2,2,4-Trimethylpentane	ppb	NC	NC	3.6 U	R	2.7 U	2.8 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	1.7 U	R	14 UJ	14 UJ	-
2-Chlorotoluene	ppb	NC	NC	4.7 U	R	4.4 U	4.4 U	-
2-Hexanone	ppb	NC	NC	3.9 U	R	4.1 UJ	4.1 UJ	-
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	4.7 U	R	4.5 U	4.5 U	-
4-Ethyl toluene	ppb	NC	NC	4.6 U	R	4.6 U	4.7 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	2.6 U	R	3.2 U	3.2 U	-
Acetone	ppb	NC	NC	11 J	R	98 U	99 U	-
Allyl chloride	ppb	NC	NC	1.9 U	R	3.4 U	3.4 U	-
Benzene	ppb	20	200	1.8 U	R	3.9 U	4.0 U	-
Benzyl chloride	ppb	NC	NC	4.6 U	R	5.5 U	5.5 U	-
Bromodichloromethane	ppb	NC	NC	2.8 U	R	3.1 U	3.1 U	-
Bromoform	ppb	NC	NC	1.9 U	R	3.4 U	3.4 U	-
Bromomethane (Methyl bromide)	ppb	NC	NC	1.2 U	R	2.2 U	2.3 U	-
Butane	ppb	NC	NC	1.1 U	R	4.5 U	4.5 U	-
Carbon disulfide	ppb	NC	NC	6.6 U	R	2.2 U	2.2 U	-
Carbon tetrachloride	ppb	NC	NC	3.3 U	R	2.7 U	2.7 U	-
Chlorobenzene	ppb	NC	NC	2.0 U	R	3.4 U	3.5 U	-
Chlorodifluoromethane	ppb	NC	NC	3.4 U	R	2.6 U	2.6 U	-
Chloroethane	ppb	NC	NC	1.6 U	R	2.5 U	2.5 U	-
Chloroform (Trichloromethane)	ppb	800	8000	8.8 J	R	9.5 J	9.7 J	-
Chloromethane (Methyl chloride)	ppb	NC	NC	1.3 U	R	11 U	11 U	-
cis-1,2-Dichloroethene	ppb	370	3700	26	R	23	24	570 ^a
cis-1,3-Dichloropropene	ppb	NC	NC	1.6 U	R	5.2 U	5.2 U	4.1 U

TABLE 1

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MORAINE, OHIO

Sample Location:	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/C S&J 2015 Dryden Road	
Sample Location:	1/6/2012	1/6/2012	3/7/2012	3/7/2012	1/6/2012	1/9/2012	3/7/2012	8/7/2012	1/6/2012
Sample Date:			Duplicate						
Parameter	ODH Sub-Slab Units	ODH Sub-Slab Screening Levels (Non-residential)	ODH Sub-Slab Action Levels (Non-residential)	a	b				
Cyclohexane	ppb	NC	NC	3.9 U	R	2.8 U	2.8 U	10 U	-
Cymene (p-Isopropyltoluene)	ppb	NC	NC	4.8 U	R	4.0 U	4.0 U	12 U	8.9 U
Dibromochloromethane	ppb	NC	NC	2.1 U	R	2.9 U	3.0 U	5.4 U	13 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	3.8 U	R	4.8 U	4.8 U	9.7 U	9.3 U
Ethylbenzene	ppb	2500	25000	2.2 U	R	4.8 U	4.8 U	5.6 U	15 U
Hexachlorobutadiene	ppb	NC	NC	6.5 U	R	5.5 U	5.5 U	17 U	15 U
Hexane	ppb	NC	NC	2.6 U	R	2.2 U	2.3 U	6.7 U	17 UJ
Isopropyl alcohol	ppb	NC	NC	3.7 U	R	3.1 UJ	3.1 UJ	9.5 U	7.1 U
Isopropyl benzene	ppb	NC	NC	3.1 U	R	4.2 U	4.2 U	7.9 U	9.8 UJ
m&p-Xylenes	ppb	2000	20000	4.8 U	R	8.4 U	8.5 U	12 U	13 U
Methyl methacrylate	ppb	NC	NC	1.3 U	R	5.5 U	5.6 U	3.3 U	27 U
Methyl tert butyl ether (MTBE)	ppb	NC	NC	1.6 U	R	12 U	12 U	4.1 U	18 U
Methylene chloride	ppb	NC	NC	4.0 J	R	4.9 J	5.3 J	12 U	38 U
Naphthalene	ppb	29	NC	8.6 U	R	6.3 U	6.4 U	22 UJ	19 J
N-Butylbenzene	ppb	NC	NC	5.5 U	R	3.2 U	3.2 U	14 U	20 UJ
N-Decane	ppb	NC	NC	-	-	-	-	-	10 U
N-Dodecane	ppb	NC	NC	-	-	-	-	-	12 U
N-Heptane	ppb	NC	NC	1.0 U	R	3.3 U	3.3 U	2.6 U	17 UJ
Nonane	ppb	NC	NC	-	-	-	-	-	10 U
N-Propylbenzene	ppb	NC	NC	5.0 U	R	3.9 U	4.0 U	13 U	9.6 U
N-Undecane	ppb	NC	NC	-	-	-	-	-	12 U
Octane	ppb	NC	NC	-	-	-	-	-	14 UJ
o-Xylene	ppb	2000	20000	2.2 U	R	4.3 U	4.3 U	5.6 U	8.0 U
Pentane	ppb	NC	NC	-	-	-	-	-	14 U
Styrene	ppb	NC	NC	3.0 U	R	4.1 U	4.1 U	7.7 U	13 U
tert-Butyl alcohol	ppb	NC	NC	7.1 U	R	2.7 U	2.7 U	18 U	13 U
tert-Butylbenzene	ppb	NC	NC	4.7 U	R	4.6 U	4.7 U	12 U	13 U
Tetrachloroethene	ppb	250	2500	5.8 J	R	6.9 J	7.0 J	9.2 J	13 U
Tetrahydrofuran	ppb	NC	NC	1.8 U	R	4.4 U	4.4 U	4.6 U	13 U
Toluene	ppb	NC	NC	1.8 U	R	3.8 U	3.8 U	4.6 U	14 U
trans-1,2-Dichloroethene	ppb	NC	NC	8.8 J	R	6.5 J	6.7 J	210	12 U
trans-1,3-Dichloropropene	ppb	NC	NC	2.0 U	R	3.4 U	3.4 U	5.1 U	200
Trichloroethene	ppb	20	200	1300 ^{ab}	R	1400 ^{ab}	1400 ^{ab}	5600 ^{ab}	11 U
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	3.4 U	R	1.7 U	1.7 U	8.7 U	5.6 U
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	1.0 U	R	2.2 U	2.2 U	2.6 U	5.3 U
Vinyl bromide (Bromoethene)	ppb	NC	NC	1.9 U	R	2.5 U	2.5 U	4.9 U	6.9 U
Vinyl chloride	ppb	20	200	2.9 U	R	5.0 U	5.0 U	7.4 U	7.8 U
Xylenes (total)	ppb	NC	NC	2.2 U	R	-	-	5.6 U	16 U
									4.6
									200
									0.32 U
									0.20 U
									0.46
									0.22 U
									0.34 U
									0.10 U
									0.19 U
									0.29 U
									0.22 U

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MORAINE, OHIO

Sample Location:		Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/A S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/B S&J 2015 Dryden Road	Building 12/C S&J 2015 Dryden Road	
Sample Location:		1/6/2012	1/6/2012	3/7/2012	3/7/2012	1/6/2012	1/9/2012	3/7/2012	8/7/2012	1/6/2012
Sample Date:										
Parameter	Units	ODH Sub-Slab Screening Levels (Non-residential)	ODH Sub-Slab Action Levels (Non-residential)	a	b					
Tentatively Identified Compounds (TIC) Volatiles										
2-Ethyl-1-hexanol A	ppb	NC	NC	-	-	-	-	-	-	140 JN
Cyclotrisiloxane, hexamethyl- A	ppb	NC	NC	-	-	-	800 JN	-	-	-
Ethyl butyl ketone A	ppb	NC	NC	-	-	-	-	-	-	27 JN
Propane A	ppb	NC	NC	-	-	-	-	-	U	-
Unknown 1	ppb	NC	NC	-	-	-	780 J	-	-	72 J
Unknown 2	ppb	NC	NC	-	-	-	-	-	-	200 J
Unknown 3	ppb	NC	NC	-	-	-	-	-	-	120 J
Gases										
Methane	%	0.5	0.5	-	-	0.16 U	0.17 U	-	0.17 U	-
Field Parameter										
Methane, field (unfiltered)	%	0.5	0.5	0.0 / 0.0	0.0 / 0.0	-	-	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Methane, field (filtered)	%	0.5	0.5	-	-	0.0 / 0	0.0 / 0	-	0 / 0.0	0 / 0.0

Notes:

J - The chemical was detected by the laboratory, the listed value is an approximate concentration

JN or NJ - The listed value of the tentatively identified compound is an approximate concentration

R - The presence or absence of the chemical cannot be verified

U - The chemical was not detected in the sample at the detection limit shown.

UJ - The chemical was not detected in the sample at the approximate detection limit shown.

NC - No criterion

-- Not applicable.

Concentration was greater than applicable criteria.

TABLE 1

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SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

<i>Sample Location:</i>		<i>Building 12 / C S&J</i>	<i>Building 12 / C S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>
<i>Sample Location:</i>		<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>
<i>Sample Date:</i>		<i>3/7/2012</i>	<i>8/7/2012</i>	<i>1/6/2012</i>	<i>3/7/2012</i>	<i>8/7/2012</i>
<i>Parameter</i>	<i>Units</i>	<i>ODH Sub-Slab Screening Levels (Non-residential)</i>	<i>ODH Sub-Slab Action Levels (Non-residential)</i>	<i>a</i>	<i>b</i>	
Volatile Organic Compounds						
1,1,1-Trichloroethane	ppb	NC	NC	0.38 J	-	7.4
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.61 U	-	1.2 U
1,1,2-Trichloroethane	ppb	NC	NC	0.54 U	-	0.57 U
1,1-Dichloroethane	ppb	160	1600	0.26 U	-	1.1 U
1,1-Dichloroethene	ppb	NC	NC	0.32 U	-	0.90 U
1,2,4-Trichlorobenzene	ppb	NC	NC	0.98 UJ	-	1.5 U
1,2,4-Trimethylbenzene	ppb	NC	NC	0.63 U	-	1.6 U
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.44 U	-	0.54 U
1,2-Dichlorobenzene	ppb	NC	NC	0.70 U	-	1.4 U
1,2-Dichloroethane	ppb	NC	NC	0.47 U	-	0.93 U
1,2-Dichloroethene (total)	ppb	NC	NC	-	-	390
1,2-Dichloropropane	ppb	NC	NC	0.52 U	-	0.42 U
1,2-Dichlortetrafluoroethane (CFC 114)	ppb	NC	NC	0.32 U	-	0.96 U
1,3,5-Trimethylbenzene	ppb	NC	NC	0.65 U	-	1.5 U
1,3-Butadiene	ppb	NC	NC	0.64 U	-	0.30 U
1,3-Dichlorobenzene	ppb	NC	NC	0.65 U	-	1.3 U
1,4-Dichlorobenzene	ppb	NC	NC	0.64 U	-	1.3 U
1,4-Dioxane	ppb	NC	NC	0.80 UJ	-	2.6 U
2,2,4-Trimethylpentane	ppb	NC	NC	0.39 U	-	1.1 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	2.0 UJ	-	0.51 U
2-Chlorotoluene	ppb	NC	NC	0.63 U	-	1.4 U
2-Hexanone	ppb	NC	NC	0.58 UJ	-	1.2 U
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.64 U	-	1.4 U
4-Ethyl toluene	ppb	NC	NC	0.66 U	-	1.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.45 UJ	-	0.78 U
Acetone	ppb	NC	NC	14 U	-	2.8 J
Allyl chloride	ppb	NC	NC	0.48 U	-	0.57 U
Benzene	ppb	20	200	0.56 U	-	0.54 U
Benzyl chloride	ppb	NC	NC	0.78 U	-	1.4 U
Bromodichloromethane	ppb	NC	NC	0.44 U	-	0.84 U
Bromoform	ppb	NC	NC	0.48 U	-	0.57 U
Bromomethane (Methyl bromide)	ppb	NC	NC	0.32 U	-	0.36 U
Butane	ppb	NC	NC	0.64 U	-	0.33 U
Carbon disulfide	ppb	NC	NC	0.31 U	-	2.0 U
Carbon tetrachloride	ppb	NC	NC	0.38 U	-	0.99 U
Chlorobenzene	ppb	NC	NC	0.49 U	-	0.60 U
Chlorodifluoromethane	ppb	NC	NC	0.94 J	-	1.0 U
Chloroethane	ppb	NC	NC	0.35 U	-	0.48 U
Chloroform (Trichloromethane)	ppb	800	8000	0.70 J	-	24
Chloromethane (Methyl chloride)	ppb	NC	NC	1.6 U	-	0.39 U
cis-1,2-Dichloroethene	ppb	370	3700	0.60 U	-	240
cis-1,3-Dichloropropene	ppb	NC	NC	0.74 U	-	0.48 U
						5.6 U

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<i>Sample Location:</i>		<i>Building 12 / C S&J</i>	<i>Building 12 / C S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>
<i>Sample Location:</i>		<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>
<i>Sample Date:</i>		<i>3/7/2012</i>	<i>8/7/2012</i>	<i>1/6/2012</i>	<i>3/7/2012</i>	<i>8/7/2012</i>
<i>Parameter</i>	<i>Units</i>	<i>ODH Sub-Slab Screening Levels (Non-residential)</i>	<i>ODH Sub-Slab Action Levels (Non-residential)</i>	<i>a</i>	<i>b</i>	
Cyclohexane	ppb	NC	NC	0.40 U	-	1.2 U
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.57 U	-	1.4 U
Dibromochloromethane	ppb	NC	NC	0.42 U	-	0.63 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	0.68 U	-	1.1 U
Ethylbenzene	ppb	2500	25000	0.68 U	-	0.66 U
Hexachlorobutadiene	ppb	NC	NC	0.78 UJ	-	2.0 U
Hexane	ppb	NC	NC	0.32 U	-	0.78 U
Isopropyl alcohol	ppb	NC	NC	0.76 J	-	1.1 U
Isopropyl benzene	ppb	NC	NC	0.60 U	-	0.93 U
m&p-Xylenes	ppb	2000	20000	1.2 U	-	1.4 U
Methyl methacrylate	ppb	NC	NC	0.79 U	-	0.39 U
Methyl tert butyl ether (MTBE)	ppb	NC	NC	1.7 U	-	0.48 U
Methylene chloride	ppb	NC	NC	0.80 J	-	1.4 J
Naphthalene	ppb	29	NC	0.90 UJ	-	2.6 U
N-Butylbenzene	ppb	NC	NC	0.46 U	-	1.7 U
N-Decane	ppb	NC	NC	-	-	4.2 U
N-Dodecane	ppb	NC	NC	-	-	5.9 UJ
N-Heptane	ppb	NC	NC	0.47 U	-	0.30 U
Nonane	ppb	NC	NC	-	-	3.3 U
N-Propylbenzene	ppb	NC	NC	0.56 U	-	1.5 U
N-Undecane	ppb	NC	NC	-	-	4.7 UJ
Octane	ppb	NC	NC	-	-	2.7 U
o-Xylene	ppb	2000	20000	0.61 U	-	0.66 U
Pentane	ppb	NC	NC	-	-	4.6 U
Styrene	ppb	NC	NC	0.58 U	-	0.90 U
tert-Butyl alcohol	ppb	NC	NC	0.38 U	-	2.1 U
tert-Butylbenzene	ppb	NC	NC	0.66 U	-	1.4 U
Tetrachloroethene	ppb	250	2500	23	-	3.5 J
Tetrahydrofuran	ppb	NC	NC	0.63 U	-	0.54 U
Toluene	ppb	NC	NC	0.54 U	-	5.5 J
trans-1,2-Dichloroethene	ppb	NC	NC	0.50 U	-	150
trans-1,3-Dichloropropene	ppb	NC	NC	0.48 U	-	0.60 U
Trichloroethene	ppb	20	200	180^a	1200^{ab}	940^{ab}
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.29 J	-	1.0 U
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.31 U	-	0.30 U
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.35 U	-	0.57 U
Vinyl chloride	ppb	20	200	0.71 U	-	0.87 U
Xylenes (total)	ppb	NC	NC	-	-	0.66 U

TABLE 1

SUMMARY OF SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS
BUILDING 12 - 2015 DRYDEN ROAD
VAPOR INTRUSION INVESTIGATION
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

<i>Sample Location:</i>		<i>Building 12 / C S&J</i>	<i>Building 12 / C S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>	<i>Building 12 / D S&J</i>
<i>Sample Location:</i>		<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>	<i>2015 Dryden Road</i>
<i>Sample Date:</i>		<i>3/7/2012</i>	<i>8/7/2012</i>	<i>1/6/2012</i>	<i>3/7/2012</i>	<i>8/7/2012</i>
<i>Parameter</i>	<i>Units</i>	<i>ODH Sub-Slab Screening Levels (Non-residential)</i>	<i>ODH Sub-Slab Action Levels (Non-residential)</i>	<i>a</i>	<i>b</i>	
<i>Tentatively Identified Compounds (TIC) Volatiles</i>						
2-Ethyl-1-hexanol A	ppb	NC	NC	-	-	-
Cyclotrisiloxane, hexamethyl- A	ppb	NC	NC	-	-	-
Ethyl butyl ketone A	ppb	NC	NC	-	-	-
Propane A	ppb	NC	NC	-	-	U
Unknown 1	ppb	NC	NC	-	-	83 J
Unknown 2	ppb	NC	NC	-	-	160 J
Unknown 3	ppb	NC	NC	-	-	-
<i>Gases</i>						
Methane	%	0.5	0.5	0.18 U	-	0.18 U
<i>Field Parameter</i>						
Methane, field (unfiltered)	%	0.5	0.5	-	-	0.0 / 0.0
Methane, field (filtered)	%	0.5	0.5	0 / 0.0	0	0.0 / 0

Notes:

J - The chemical was detected by the laboratory, the listed value is an approximate concentration

JN or NJ - The listed value of the tentatively identified compound is an approximate concentration

R - The presence or absence of the chemical cannot be verified

U - The chemical was not detected in the sample at the detection limit shown.

UJ - The chemical was not detected in the sample at the approximate detection limit shown.

NC - No criterion

-- Not applicable.

[Red Box] - Concentration was greater than applicable criteria.

TABLE 2

**SUMMARY OF INDOOR AIR ANALYTICAL RESULTS
VAPOR INTRUSION INVESTIGATION
BUILDING 12 - 2015 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO**

<i>Sample Location:</i>	<i>ODH Indoor Air Screening Levels</i>	<i>ODH Indoor Air Action Levels (Non-residential)</i>	<i>Outdoor Air S&J 2015 Dryden Road</i>	<i>IA_A S&J 2015 Dryden Road</i>	<i>IA_C S&J 2015 Dryden Road</i>	<i>IA_D S&J 2015 Dryden Road</i>
<i>Parameter</i>	<i>Units</i>		<i>3/7/2012</i>	<i>3/7/2012</i>	<i>3/7/2012</i>	<i>3/7/2012</i>
			<i>a</i>	<i>b</i>		
Volatile Organic Compounds						
1,1,1-Trichloroethane	ppb	NC	NC	0.030 U	0.030 U	0.030 U
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.061 U	0.061 U	0.061 U
1,1,2-Trichloroethane	ppb	NC	NC	0.054 U	0.054 U	0.054 U
1,1-Dichloroethane	ppb	16	160	0.026 U	0.026 U	0.026 U
1,1-Dichloroethene	ppb	NC	NC	0.032 U	0.032 U	0.032 U
1,2,4-Trichlorobenzene	ppb	NC	NC	0.098 UJ	0.098 UJ	0.098 UJ
1,2,4-Trimethylbenzene	ppb	NC	NC	0.063 U	0.39	0.18 J
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.044 U	0.044 U	0.044 U
1,2-Dichlorobenzene	ppb	NC	NC	0.070 U	0.070 U	0.070 U
1,2-Dichloroethane	ppb	NC	NC	0.047 U	0.047 U	0.047 U
1,2-Dichloroethene (total)	ppb	NC	NC	-	-	-
1,2-Dichloropropane	ppb	NC	NC	0.052 U	0.052 U	0.052 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	0.032 U	0.032 U	0.032 U
1,3,5-Trimethylbenzene	ppb	NC	NC	0.065 U	0.10 J	0.065 U
1,3-Butadiene	ppb	NC	NC	0.064 U	0.064 U	0.064 U
1,3-Dichlorobenzene	ppb	NC	NC	0.065 U	0.065 U	0.065 U
1,4-Dichlorobenzene	ppb	NC	NC	0.064 U	0.28	0.25
1,4-Dioxane	ppb	NC	NC	0.080 UJ	0.080 UJ	0.080 UJ
2,2,4-Trimethylpentane	ppb	NC	NC	0.039 U	0.089 J	0.061 J
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	0.20 UJ	0.56 J	0.38 J
2-Chlorotoluene	ppb	NC	NC	0.063 U	0.063 U	0.063 U
2-Hexanone	ppb	NC	NC	0.058 UJ	0.058 UJ	0.058 UJ
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.064 U	0.064 U	0.064 U
4-Ethyl toluene	ppb	NC	NC	0.066 U	0.12 J	0.077 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.045 UJ	6.1 J	1.9 J
Acetone	ppb	NC	NC	1.4 U	5.5	3.3 J
Allyl chloride	ppb	NC	NC	0.048 U	0.048 U	0.048 U
Benzene	ppb	2	20	0.056 U	0.22	0.18 J
Benzyl chloride	ppb	NC	NC	0.078 U	0.078 U	0.078 U
Bromodichloromethane	ppb	NC	NC	0.044 U	0.044 U	0.044 U
Bromoform	ppb	NC	NC	0.048 U	0.048 U	0.048 U
Bromomethane (Methyl bromide)	ppb	NC	NC	0.032 U	0.032 U	0.032 U
Butane	ppb	NC	NC	0.78	2.5	1.9
Carbon disulfide	ppb	NC	NC	0.031 U	0.031 U	0.031 U
Carbon tetrachloride	ppb	NC	NC	0.038 U	0.081 J	0.078 J
Chlorobenzene	ppb	NC	NC	0.049 U	0.049 U	0.049 U
Chlorodifluoromethane	ppb	NC	NC	0.34	0.84	0.70

TABLE 2

**SUMMARY OF INDOOR AIR ANALYTICAL RESULTS
VAPOR INTRUSION INVESTIGATION
BUILDING 12 - 2015 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO**

Parameter	Units	ODH Indoor Air	ODH Indoor Air	Outdoor Air S&J	IA_A S&J	IA_C S&J	IA_D S&J
		Screening Levels (Non-residential)	Action Levels (Non-residential)	2015 Dryden Road 3/7/2012	2015 Dryden Road 3/7/2012	2015 Dryden Road 3/7/2012	2015 Dryden Road 3/7/2012
a	b						
Chloroethane	ppb	NC	NC	0.035 U	0.035 U	0.035 U	0.035 U
Chloroform (Trichloromethane)	ppb	80	800	0.038 U	0.066 J	0.049 J	0.074 J
Chloromethane (Methyl chloride)	ppb	NC	NC	0.53	0.54	0.59	0.68
cis-1,2-Dichloroethene	ppb	37	370	0.060 U	0.077 J	0.060 U	0.093 J
cis-1,3-Dichloropropene	ppb	NC	NC	0.074 U	0.074 U	0.074 U	0.074 U
Cyclohexane	ppb	NC	NC	0.040 U	0.21 J	0.077 J	0.16 J
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.057 U	0.057 U	0.057 U	0.060 J
Dibromochloromethane	ppb	NC	NC	0.042 U	0.042 U	0.042 U	0.042 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	0.52	0.49	0.50	0.56
Ethylbenzene	ppb	250	2500	0.068 U	0.17 J	0.094 J	0.17 J
Hexachlorobutadiene	ppb	NC	NC	0.078 UJ	0.078 UJ	0.078 UJ	0.078 UJ
Hexane	ppb	NC	NC	0.032 U	0.23 J	0.17 J	0.24 J
Isopropyl alcohol	ppb	NC	NC	0.10 J	25 J	14 J	30 J
Isopropyl benzene	ppb	NC	NC	0.060 U	0.060 U	0.060 U	0.060 U
m&p-Xylenes	ppb	200	2000	0.12 U	0.58	0.29	0.51
Methyl methacrylate	ppb	NC	NC	0.079 U	0.26 J	0.13 J	0.079 U
Methyl tert butyl ether (MTBE)	ppb	NC	NC	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	ppb	NC	NC	0.14 J	0.45 J	0.40 J	0.39 J
Naphthalene	ppb	2.9	NC	0.090 UJ	0.12 J	0.090 UJ	0.090 UJ
N-Butylbenzene	ppb	NC	NC	0.046 U	0.046 U	0.046 U	0.046 U
N-Decane	ppb	NC	NC	-	3.8	1.6	-
N-Dodecane	ppb	NC	NC	-	0.56 J	0.14 J	-
N-Heptane	ppb	NC	NC	0.047 U	1.9	0.59	1.0
Nonane	ppb	NC	NC	-	1.7	0.70	-
N-Propylbenzene	ppb	NC	NC	0.056 U	0.057 J	0.056 U	0.056 J
N-Undecane	ppb	NC	NC	-	1.6 J	0.53 J	-
Octane	ppb	NC	NC	-	0.11 J	0.066 J	-
o-Xylene	ppb	200	2000	0.061 U	0.25	0.12 J	0.23
Pentane	ppb	NC	NC	-	4.3	4.1	-
Styrene	ppb	NC	NC	0.058 U	0.075 J	0.058 U	0.067 J
tert-Butyl alcohol	ppb	NC	NC	0.038 U	0.15 J	0.11 J	0.18 J
tert-Butylbenzene	ppb	NC	NC	0.066 U	0.066 U	0.066 U	0.066 U
Tetrachloroethene	ppb	25	250	0.040 U	0.62	0.41	0.67
Tetrahydrofuran	ppb	NC	NC	0.063 U	0.063 U	0.075 J	0.063 U
Toluene	ppb	NC	NC	0.054 U	1.5	0.83	1.6
trans-1,2-Dichloroethene	ppb	NC	NC	0.050 U	0.083 J	0.050 U	0.089 J
trans-1,3-Dichloropropene	ppb	NC	NC	0.048 U	0.048 U	0.048 U	0.048 U
Trichloroethene	ppb	2	20	0.036 U	2.7 ^a	1.6	3.1 ^a
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.17 J	0.27	0.24	0.28
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.031 U	0.066 J	0.062 J	0.074 J
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.035 U	0.035 U	0.035 U	0.035 U
Vinyl chloride	ppb	2	20	0.071 U	0.071 U	0.071 U	0.071 U
Xylenes (total)	ppb	NC	NC	-	-	-	-

TABLE 2

SUMMARY OF INDOOR AIR ANALYTICAL RESULTS
VAPOR INTRUSION INVESTIGATION
BUILDING 12 - 2015 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

<i>Sample Location:</i>				<i>Outdoor Air S&J</i> 2015 Dryden Road	<i>IA_A S&J</i> 2015 Dryden Road	<i>IA_C S&J</i> 2015 Dryden Road	<i>IA_D S&J</i> 2015 Dryden Road
<i>Sample Location:</i>				3/7/2012	3/7/2012	3/7/2012	3/7/2012
<i>Parameter</i>		<i>ODH Indoor Air Screening Levels (Non-residential)</i>	<i>ODH Indoor Air Action Levels (Non-residential)</i>				
		<i>a</i>	<i>b</i>				
<i>Tentatively Identified Compounds (TIC) Volatiles</i>							
Ethanol A	ppb	NC	NC	-	210 NJ	97 NJ	-
Propane A	ppb	NC	NC	-	U	U	-
Unknown A	ppb	NC	NC	-	150 NJ	72 NJ	-
Unknown B	ppb	NC	NC	-	6.4 NJ	-	-
<i>Gases</i>							
Methane	%	0.05	0.05	-	0.19 U^{ab}	0.20 U^{ab}	-
<i>Field Parameter</i>							
Methane, field (unfiltered)	%	0.05	0.05	-	-	-	-
Methane, field (filtered)	%	0.05	0.05	0.0 / 0.0	0.0 / 0.0	0 / 0.0	0 / 0.0

Notes:

- J - The chemical was detected by the laboratory, the listed value is an approximate concentration
 JN or NJ - The listed value of the tentatively identified compound is an approximate concentration
 U - The chemical was not detected in the sample at the detection limit shown.
 UJ - The chemical was not detected in the sample at the approximate detection limit shown.
 NC - No criterion
 -- Not applicable.
 Concentration was greater than applicable criteria.